NEMESSURI, M.; ALTMAN, K.

Significance of myotatic reflexes in athletic motions. Acta physiol. hung. 11(Suppl):79-80 1957.

1. Lehrstuhl fur bewegungslehre und heilgymnastik der hochschule fur leibesubungen, Budapest.

(PHYSICAL EDUCATION AND TRAINING
myotatic reflexes in phys. exercises, study by motion picture (Ger))
(MUSCLES, physiol.
same)

NEMESURI, Mihaly, dr.

Work of sport physicians. Nepegeszsegugy 43 no.6:185-188 Je '62.

1. Kozlemeny as Egeszegugyi Miniszterium Orszagos Testneveles-es Sportegeszsegugyi Intezetebol.
(SPORT MEDICINE)

NEMESURI, Mihaly dr., az orvostudományok kandidatusa

Physiology of developing muscular strength. Elet tud 18 no.51:1625-1626 22 D '63.

SZIKSZ . NEMESSURI M.

...lies ... of quartz ... -irradiation ... isolated ... Acta physiol. Acad. sci. Hung. 25 no.4: ... '64

1. ... Medicine, Budapest.

L 14867-66

ACC NR: AT6007402 SOURCE CODE: HU/2505/65/026/00X/0024/0025

21
20
B+1

AUTHOR: Kalomaoki, J.; Stadler, E.; Nemessuri, M.

ORG: Central Institute of Sports Medicine, Budapest (Kozponti Sportegeszsegugyi Intezet)

TITLE: Spiroergometric demonstration of the autonomic regulation related to muscle activity [This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July, 1964]

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 24-25

TOPIC TAGS: medical conference, circulatory system, human physiology, biologic respiration, muscle physiology

ABSTRACT: At the 1963 meeting of the Society it has been reported that a negative phase in cardiac frequency developed following controlled physical activity. This counter-regulatory phenomenon was ascribed to trophotropic dominance and was correlated with the degree of physical fitness. In further investigations using spiro-

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ACC NR: AT6007402

ergometry it was demonstrated that, upon performance of a certain type of physical work, the regulatory phenomena mentioned were followed by a counter-regulatory phase which manifested itself in changes in O_2 consumption and CO_2 production. An analysis of the autonomic reactions during the individual phases of work (state of readiness, running activity, ergostasis, restitution) revealed that the trophotropic dominance in restitution was marked in subjects showing an economical regulation, while it was slight or absent in the other subjects. The counter-regulatory phenomenon may thus be looked upon as an overcompensation, creating in the organism conditions more favorable from the standpoint of performance than those prevailing before muscle work. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2

NEMESSZEGH, GY.

Experiments with nonlinear condensers. p. 196. RADIOTECHNIKA, Budapest. Vol. 5, no. 9, Sept. 1955.

SOURCE: East European Accessions List (EEAL), LC. Vol. 5, no. 2, Feb. 1956

NEMESSZEGHY, Gyorgy

Fitting of high-frequency transistor amplifiers. Radiotechnika 11 no.11:348-349 N '61.

NEMESSZEGHY, Gyorgy

Temperature dependence of transistor and a simple basis-distributing demensioning. Radiotechnika 12 no.5:132-134 My '62.

MIHESSZEGHY, Gyorgy

Interesting transistor circuits - with some parts. Radiotechnika 12 no.8:240-241 '62.

NEMESSZEGHY, Gyorgy

Dimensioning magnetic circuits on the basis of electricity analogy.
Fiz szemle 12 no.9:286-289 S '62.

1. Puskas Tivadar Tavkozlesi Technikum, Budapest.

NEMESSZEGHY, Gyorgy

Transistor hybrid substitute circuit. Radiotechnika 12 no.11:382-383 N '62.

NEMESSZEGHY, Gyorgy

On the analogy of mechanical and electric oscillations. Fiz szemle 13 no.3:90-94 Mr '63.

1. Felsofoku Tavkozlesi Technikum.

NEMESSZEGHY, Gyorgy

Transistor antenna booster for television. Radiotechnika 13 no.3:100-102 Mr '63.

NEMESSZEGHY, Gyorgy

Geometric constructions in transistor engineering. Radiotechnika 13 no.6:204-206 Je '63.

L 58353-65 EWT(d)/EWT(l)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/EWA(h)
Pz-6/Pf-4/Peb IJP(c) JD/AT
ACCESSION NR: AP5016396 UR/0120/65/000/003/0201/0205
621.315.592

AUTHOR: Lerintsf, A.; Nemet, T.; Nejezt, P.; Tikhant, Ye.

TITLE: Device for the detection of microonuniformities in semiconductors

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1965, 201-205

TOPIC TAGS: semiconductor, semiconductor nonuniformity, flaw detection

ABSTRACT: Fluctuations of impurity concentrations in semiconductors introduce minute nonuniformities which tend to propagate in the direction of the crystal growth. These flaws can be exposed for visual inspection with the described pulse generator. The pulse generator may be used for exposure of crystal irregularities by the copper-plating method, but it is particularly suited for the method of electrolytic etching. With the latter, the semiconductor served as an anode in a 10% KOH solution at T = 340K through which periodic pulses are applied. If the sample has irregularities, the etching

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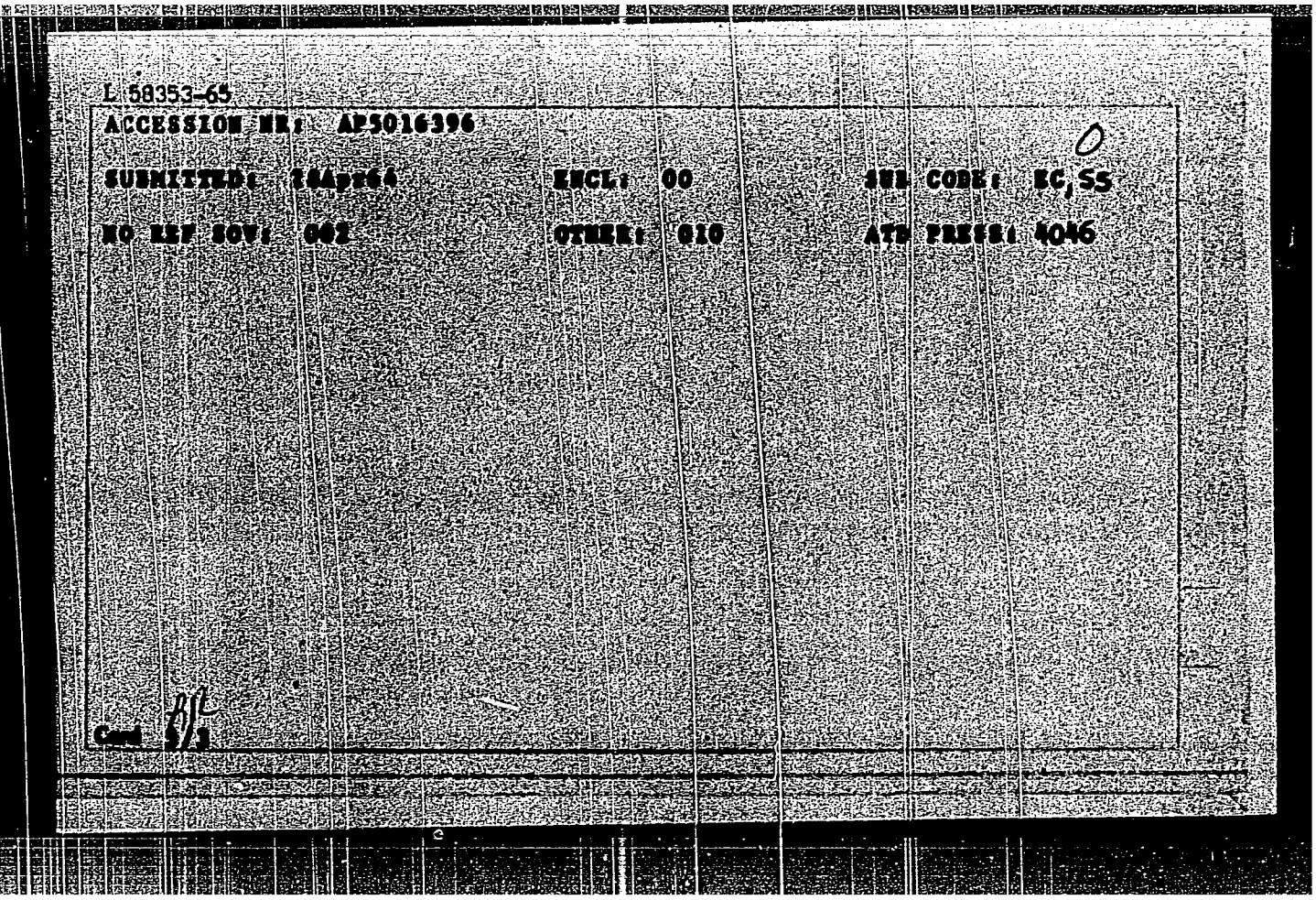
L 59353-65
ACCESSION NR: AP5016396

will not be uniform and will form clearly defined parallel stripes when the separation between flaws is greater than 0.1 mm. The pulse generator uses a silicon controlled rectifier (SCR) in conjunction with two auxiliary circuits to form the pulses. The SCR in series with the load is connected to the secondary winding of the transformer. A monostable multivibrator circuit activates the SCR and controls the pulse period. Activation of the SCR in turn triggers a delay circuit which switches off the SCR after a preset delay. This delay controls the pulse duration. The pulse generator is capable of delivering pulses of 20 amp—40 amp at 150—500 v with 0.1—3-cps repetition rate and < 10 msec duration. Tests with low-resistivity n- and p-type germanium showed good contrast between stripes even when they were separated by less than 0.1 mm. Orig. art. has: 4 figures. [BD]

ASSOCIATION: Fizika-tekhnicheskiy institut AN Vengrii, Budapest (Physicotechnical Institute, AN Hungary); Nauchno-issledovatel'skiy institut promyshlennosti tekhniki svyazi (Scientific Research Institute of the Communications Engineering Industry)

Card 2/3



L 58353-65
ACCESSION NR: AP5016396
SUBMITTED: 24Apr64 ENCL: 00 SUB CODE: EC, SS
NO REF SOV: 002 OTHER: 010 ATD PRESS: 4046
Card 2/2

L 35266-66

ACC NR: AP6024759 SOURCE CODE: HU/0012/65/013/011/0335/0337

AUTHOR: Lorinczy, Andras--Lerintsi, A.; Nemeth, Tibor--Nemet, T.; Nemethne, Sallay Margit--Nemet, Sh. M.

ORG: Research Institute for Technical Physics, MTA (MTA Muszaki Fizikai Kutato Intezete)

TITLE: Pressure transducer using a photodiode

SOURCE: Meres es automatika, v. 13, no. 11, 1965, 335-337

TOPIC TAGS: pressure transducer, photodiode

ABSTRACT: A new pressure transducer was described. It is based on a Bourdon-tube manometer operating in the 0 - 200 atm. pressure range to which a movable shield is attached. This shield moves in front of an incandescent bulb and partly or fully shields its light from a photodiode. The photocurrent is read as the measure of the pressure. The mechanical construction, electrical circuitry, operation, performance, and applications of the device were described in some detail. The characteristic curves for the transducer and the methods for its calibration were described. Orig. art. has: 4 figures. [JPRS: 34,162]

SUB CODE: 09 / SUBM DATE: 07Aug64 / ORIG REF: 001 / OTH REF: 005

Card 1/1

UDC: 621.398:53.092:621.382.2.082.52

NEMET, YE. S.

NEMET, YE. S. -- "Investigation of the Kinetics of Adsorption in a Suspended Layer." Min Higher Education USSR, Leningrad Order of Labor Red Banner Technological Inst imeni Leningrad Soviet, Chair of Processes and Apparatus, Leningrad, 1955 (Dissertation For the Degree of Doctor of Technical Sciences)

SO: Knizhnaya letopis', No. 37, 3 September 1955

NEMET, YE.S.

USSR/Processes and Equipment for Chemical Industries K-1
Processes and Apparatus for Chemical Technology

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14185

Author : Romankov P.G., Lepilin V.N., Nemet Ye.S.
Title : Adsorption in Suspension Layer

Orig Pub : Khim. nauka i prom-st', 1956, 1, No 3, 317-324

Abstract : By methods of theory of similarity a set of criteria was derived which define kinetics of process of sorption from flow of mixture during period of constant rate of sorption (prior to passage) and period of dropping rate of sorption (after passage). To determine nature of functional correlation between criteria, experimentally investigated was adsorption, under dynamic conditions, of gasoline vapor from air (initial concentration C_0 = 4-30 mg/liter). Experiments were conducted with activated carbon of grades BAU,AG,AR with particle diameter 0.5-3.5 mm in columns 32-125 mm diameter and initial height of layer

Card 1/2 - 22 -

SOV-124-58-8-8996

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 98 (USSR)

AUTHORS: Romankov, P.G., Lepilin, V.N., Nemet, Ye. S.

TITLE: Some Aspects of the Aerodynamics of a Suspended Layer Under Conditions Obtaining in Narrow Conduits (Nekotoryye voprosy aerodinamiki vzveshennogo sloya v usloviyakh uzkikh trub)

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1957, Nr 39, pp 28-33

ABSTRACT: Glass conduits 32, 49, and 52 mm in diameter are used to investigate the process of formation of a suspended layer. The suspended layer here consists of irregularly shaped particles of low mechanical strength. Particle diameters varied from 0.5 to 3.5 mm, the initial height of the layer from 50 to 500 mm, and the densities from 0.482 to 1.08 g/cm^3. Air is blown through the layer. The authors show that prior to formation of a pseudofluidized layer the resistance to a flow increases with increasing flow velocity. In the velocity range delimited, at the low end, by the velocity at which the particles just begin to be lifted into suspension and, at the high end, by the velocity at which all of them have passed into suspension, the resistance exerted by the conduit decreases somewhat, but beyond

Card 1/2

Some Aspects of the Aerodynamics of a Suspended Layer (cont.)

, that velocity at which all the particles have passed into suspension it becomes constant, remaining equal to the weight of the suspended layer. On the basis of an analysis of their experimental data the authors evolve a formula for determining the head losses in this range of flow velocities

$$\Delta p = 1.02\frac{G}{S},$$

wherein Δp is the head loss in the layer, G the weight of the layer, and S the cross-sectional area of the conduit. The fact that the numerical coefficient is not equal to unity is attributed by the authors to energy losses occasioned by the overcoming of friction. When a certain critical velocity is reached, the granular substance of the particles starts to be eroded and carried off---which produces a sharp drop in the resistance. A detailed description is given of the peculiarities of the motion of the suspended material. In this connection, it is found that the particles travel through the layer in a chaotic fashion and that, as reported by other investigators, too, the layer pulsates and funnels form within it. Bibliography: 9 references.

Ye. M. Minskiy

NEMET-GASPAR, Zsuzsanna; CSEH, S.

Paper chromatographic analysis of the liquid phase of Zervicovaginal secretions of cows. Acta veter Hung 13 no.2: 175-187 '63.

1. Physiologisches Institut (Direktor: A. Kemeny) und Geburtshilfliche Klinik (Direktor:K. Bolcshazy) der Veterinärmedizinischen Universitat in Budapest.

NEMET-GASPAR, Zsuzsanna; CSEH, S.

Citrate secretion of the genitals of cows. Acta veter Hung 13 no. 2:189-196 '63.

1. Physiologisches Institut (Direktor: Prof. A. Kemeny) und Geburtshilfliche Klinik (Direktor: Prof. K. Bolcshazy) der Veterinarmedizinischen Universitat, Budapest.

NEMETH A

NEMETH, A.
Determination of the curve characteristics of [illegible]
by using by calculation. p. 17

Vol. 4, No. 5, 1961 Budapest, Hungary LITERATURE PERIODICAL

So: Monthly List of East European Accessions, (EEAI), LC, Vol. 11, No. 3, March, 19[illegible]

RICHTER, Richard, Dr., okl. banyamernok, a muszaki tudomanyok kandidatusa, egyetemi docens; NEMETH, Alojos, okl. banyamernok, tudomanyos kutato

On safety pillars. Pt.2. Bany lap 94 no.5: 294-300 My '61.

1. Nehezipari Muszaki Egyetem, Banyamernoki Kar, Miskolc.

HEGEDUS, Tibor; NEMETH, Andras; SZEKELY, Attila

World situation and prospective trend of the manufacture of plasticizers. Magy kem lap 19 no. 1: 30-35 Ja '64.

1. Vegyipari INVEST Vallalat Kozgazdasagi Foosatalya.

CSIPAK, J.; [illegible] A.; SCULTETY, S.

Etiological role of hyperergia in acute hematogenous osteomyelitis. Kiserletes orvostud. 6 no.6:521-526 Nov 54.

1. Szegedi Orvostudomanyi Egyetem I. sz. Sebeszeti Klinikaja.

(OSTEOMYELITIS, exper.
role of hyperergic tissue reaction in rabbits)
(ALLERGY, exper.
hyperergic reaction, etiol. role in exper. osteomyelitis in rabbits)

BENTZIK, Mihaly, dr.; BERCI, Gyorgy, dr.; NEMETH, Andras, dr.; PETRI, Gabor, dr.

Implantation of the internal mammary artery into the heart muscle for the improvement of its blood supply as based on experimenta research. Magy. sebeszet 8 no.209-272:209-215 Aug 55.

1. A Szegedi Orvostudomanyi Egyetem Sebeszeti Mutettani Intezetenek kozlemenye. (Igazgato: Petri, Gabor, dr. egyeteni tanar).

(HEART, blood supply
ischemia insuff, exper. surg., implantation of internal mammary artery.)
(TRANSPLANTATION
external mammary artery in ischemia of the heart.)

VIGH, Katalin (Mrs) (Budapest, XI., Gellert ter 4), NEMETI, A. (Mrs) (Budapest, XI., Gellert ter 4)

Qualitative analysis of cations in semimicroscopic size by means of the ring oven method. Acta chimica Hung 41 no.1/2:67-74 '64.

1. Institut fur Allgemeine Chemie der Technischen Universität Budapest.

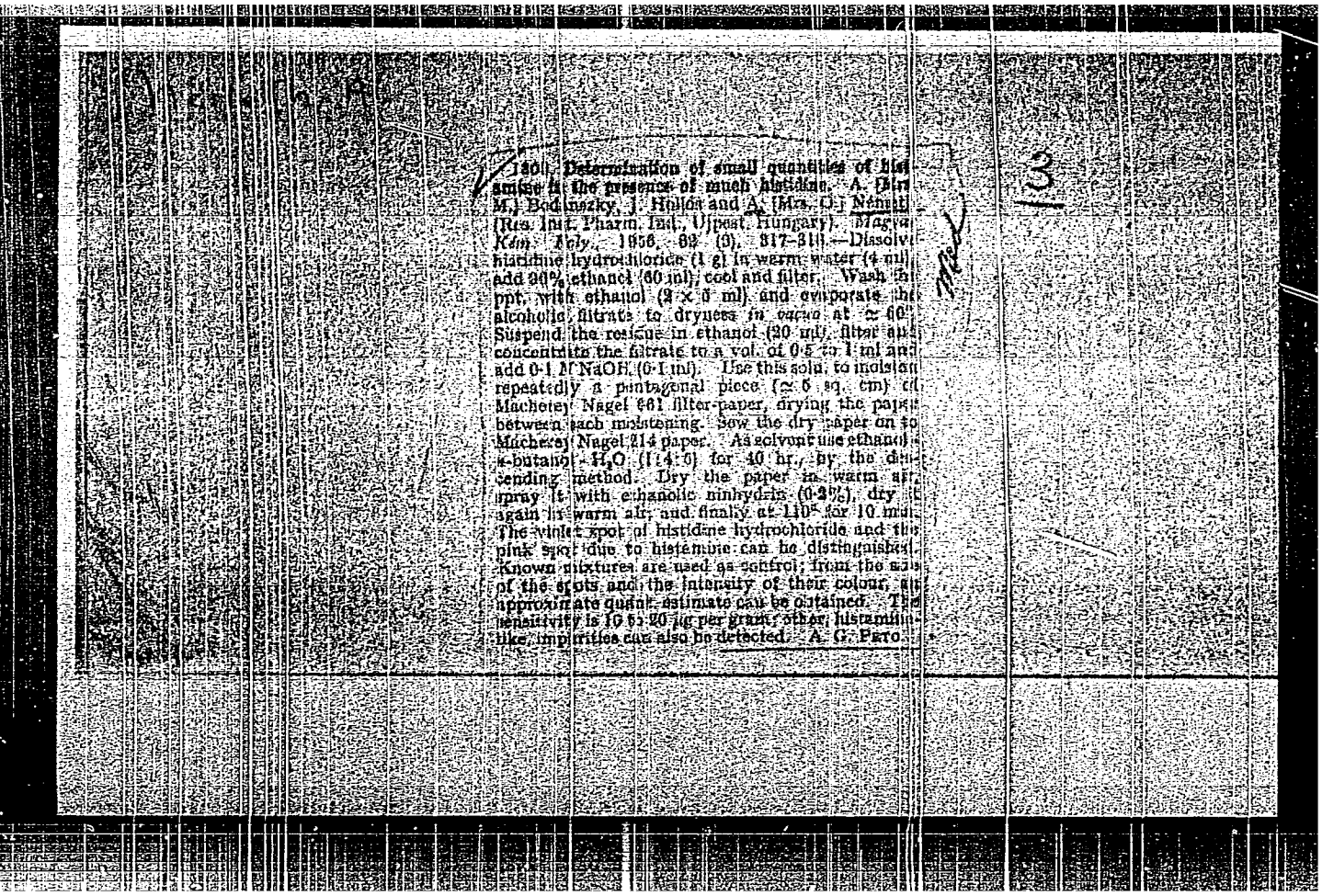
EXCERPTA MEDICA Sec.9 Vol.11/8 Surgery Aug 1957

NEMETH A

4327. NEMETH A., PINTÉR I. and GÁL Gy. I Chir. Klin. und Pathol. Physiol. Inst., Szegeder Med. Univ., Szeged. *Eine einfache Kunstniere. A simple artificial kidney Z. UROL. 1956, 49/9 (535-545) Illus. 12

A description is given of a simple artificial kidney, which consists of two cellophane compartments in frames, in which 1,000 ml. blood is exposed for 2 hours to a dialysing solution. This fractional haemodialysis could be repeated several times daily, and the dialysed blood can be reinfused without risk. Not only does this ensure removal of urea (8-10 g. at 10 dialyses daily) but a favourable biological effect is obtained by the diuretic effect. This was demonstrated particularly clearly in 2 cases.

Hohendorf - Munich



1301. **Determination of small quantities of histamine in the presence of much histidine.** A. [Mrs.] M.] Bodnárszky, J. Hnilica and A. [Mrs. O.] Németh (Res. Inst. Pharm. Ind., Ujpest, Hungary). *Magyar Kém. Folyt.*, 1956, 62 (5), 317–318.—Dissolve histidine hydrochloride (1 g) in warm water (4 ml), add 90% ethanol (60 ml), cool and filter. Wash the ppt. with ethanol (2 × 5 ml) and evaporate the alcoholic filtrate to dryness *in vacuo* at ≈ 40°. Suspend the residue in ethanol (20 ml), filter and concentrate the filtrate to a vol. of 0·5 to 1 ml and add 0·1 *M* NaOH (0·1 ml). Use this soln. to moisten repeatedly a pentagonal piece (≈ 6 sq. cm) of Macherey Nagel 661 filter-paper, drying the paper between each moistening. Sew the dry paper on to Macherey Nagel 214 paper. As solvent use ethanol–*n*-butanol–H_2O (1:4:5) for 40 hr., by the descending method. Dry the paper in warm air, spray it with ethanolic ninhydrin (0·3%), dry again in warm air, and finally at 110° for 10 min. The violet spot of histidine hydrochloride and the pink spot due to histamine can be distinguished. Known mixtures are used as control; from the size of the spots and the intensity of their colour, an approximate quant. estimate can be obtained. The sensitivity is 10 to 20 μg per gram; other histamine-like impurities can also be detected.—A. G. Pető

GAL, Gyorgy, dr.,; NEMETH, Andras, dr.,; PINTER, Imre, dr.

Hemodialysis in the therapy of severe barbiturate poisoning.
Orv. hetil. 97 no.21:582 20 May 56.

1. A Szegedi Orvost. Egy. I. sz. Seb. Klin. (igaz. Jaki Gyula dr. egyet. tanar) es Korelettani Intex. (igaz.: Karady Istvan dr. egyet. tanar) kozl.
(BARBITURATES, pois.
ther., hemodialysis in severe pois. (Hun))
(DIALYSIS
hemodialysis, ther., severe barbiturate pois. (Hun))
(KIDNEYS, artif.
same)
(POISONING
barbiturates, ther., hemodialysis in severe pois. (Hun))

NEMETH A.

2613. A SIMPLE INSTRUMENT FOR FRACTIONAL DIALYSIS OF BLOOD (SO-CALLED ARTIFICIAL KIDNEY) - Szakaszos vérdialysálásra szolgáló egyszerű eszköz (u.n.'művese') - Németh A., Pintér I. and Gál G. Szegedi Orvostudományi Egyetem I.sz.Sebészeti Klin., Kóréletani Intézetének Közleménye - MAG.SEBÉSZET. 1957, 10/2-3 (175-182) Graphs 1 Illus. 5

In 4 patients with uraemia fractional dialysis was successfully performed by employing the Bartrina apparatus. The authors devised a more effective apparatus, which was used with good result in 8 cases of acute uraemia and in 2 of barbiturate poisoning. According to their opinion the dialysed reinfused blood has a certain biological effect too, in which the antidiuretic materials and the decrease of the histamine level have a role.

Szendrői - Budapest (IX, 6)

GAL, Gyorgy, dr.; NEMETH, Andras, dr.

10 cases of renal complications following blood transfusion.
Orv.hetil. 101 no.1:13-18 Ja '60.

1. Szegedi Orvostudomanyi Egyetem, I. sz. Sebeszeti klinika.
(BLOOD TRANSFUSION compl.)
(BLOOD GROUPS)
(KIDNEY DISEASES etiol)

GAL, Gyorgy, dr.; NEMETH, Andras, dr.

Role of the "absolute" eosinophil count in the prognosis of acute uremia. Orv.hetil. 101 no.50:1770-1773 11 D'60.

1. Szegedi Orvostudomanyi Egyetem, I. Sebeszeti Klinika.
(UREMIA blood)
(EOSINOPHILS)

NEMETH, Andras, dr.; GAL, Gyorgy, dr.; FAZAKAS, Sandor, dr.

The role of hypermagnesemia in uremic "toxicosis". Orv. hetil. 102 no.20:913-917 14 My '61.

1. I sz. Sebeszeti Klinika, Szeged.

(MAGNESIUM blood) (UREMIA blood)

HUNGARY

GAL, Gyorgy, Dr, [illegible], Sandor, Dr; Medical University of Szeged, I. [illegible] Orvostudomanyi Egyetem, I. Sebeszeti Klinika).

"Some Aspects of [illegible] Following Septic (Criminal) Abortus."

Budapest, Orvosi Hetilap, [illegible], 4 June 63, pages 1066-1069.

Abstract: [Author's] [illegible] clinical data and conclusions are presented on 24 cases of [illegible] following septic abortions. Eight deaths are reported. [illegible] treatment for the acute uremia was effective [illegible] mortality rate is expected from a more effective [illegible] inflammatory complications that followed. 11 Hungarian, [illegible].

1/1

HUNGARY

Budapest, Orvosi Hetilap, Vol 104, No 34, 25 Aug 1963, pages 1602-1604.

taneous administration of cortison and 6-mercaptopurine give the best results. All 11 are Western references.

HUNGARY

BARADNAY, Gyula, dr.; GAL, Gyorgy, dr.; NEMETH, Andras, dr.

Bilateral (symmetrical) renal cortical necrosis. Orv. hetil. 105 no.4:1884-1888 4 Oct 64

1. Szegedi Orvostudomanyi Egyetem, Korboncatani es Korszovettani Intezet es I. Sebeszeti Klinika.

BOROS, Mihaly, dr.; GAL, Gyorgy, dr.; KAISER, Gabriella, dr.; FAZEKAS, Sandor, dr.; NEMETH, Andras, dr.

Some blood coagulation problems in the treatment with "artificial kidney". Orv. hetil. 105 no.13: 595-598 29 Mr '64.

1. Szegedi Orvostudomanyi Egyetem, I.Sebeszeti Klinika.

*

GAL, György, dr.; FAZAKAS, Sandor, dr.; NEMETH, Andras, dr.

Dialysis in the treatment of barbiturate poisoning. Orv. hetil. 106 no.26:1211-1213 27 Je'65.

1. Szegedi Orvostudomanyi Egyetem, I. Sebeszeti Klinika (Igazgato: Petri, Gabor, dr.).

L 1176-66

ACCESSION NR: AT5025204 HU/2502/64/042/004/0397/0408

AUTHOR: Laszlo, Antal (Laszlo, A.)(Professor, Doctor)(Veszprem); Nemeth, Andras (Nemet, A.)(Doctor)(Veszprem); Fay, Laszlo (Fai, L.)(Doctor)(Veszprem); Kupka, Gyorgy (Kupka, D'.)(Veszprem)

TITLE: Correlation of the temperature of auto-ignition with the ignition delay time in flowing gas mixtures

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 4, 1964, 397-408

TOPIC TAGS: auto ignition, ignition lag, oxygen, methane, temperature

Abstract: [English article; authors' English summary, modified] The values of concentration, temperature, ignition delay time, and flow rate pertaining to inflammation were determined for methane-oxygen mixtures. The composition of the gas mixtures ranged from 32 to 41% oxygen; the auto-ignition temperatures, from 600 to 850°C. A correlation between ignition delay time and auto-ignition temperature was established. Regression analysis of the dependence of the constants on the concentration and on the load applied yielded a linear equation. Orig. art. has 6 figures, 2 formulas, and 3 tables.

Card 1/2

L 1176-66

ACCESSION NR: AT5025204

ASSOCIATION: Hungarian Oil and Gas Research Institute, Veszprem

SUBMITTED: 20Jan64 ENCL: 00 SUB CODE: FP

NO REF SOV: 000 OTHER: 009 JPRS

Card 2/2

L 1174-66

ACCESSION NR: AT5025205 HU/2502/64/042/004/0408/0419

AUTHOR: Laszlo, Antal (Laslo, A.)(Professor, Doctor)(Veszprem); Nemeth, Andras (Nemet, A.)(Doctor)(Veszprem); Fay, Laszlo (Fai, L.)(Doctor)(Veszprem); Szalay, Otto (Salai, O.)(Veszprem)

TITLE: Investigation of auto-ignition in a flowing system

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SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 4, 1964, 408-419

TOPIC TAGS: auto ignition, ignition lag, flow rate, oxygen, methane

Abstract: [English article] Corresponding concentration, temperature, ignition delay time, and flow rate values were determined for oxygen-methane systems and an equation was derived for the characterization of the relationship between these factors. It was found that the relation is similar to that existing in a stationary system. The values calculated from the equation correlated well with experimentally determined values.

Orig. art. has 19 formulas, 9 graphs, and 1 table.

ASSOCIATION: Hungarian Oil and Gas Research Institute, Veszprem

SUBMITTED: 12May64 ENCL: 00 SUB CODE: FP

NO REF SOV: 010 OTHER: 005 JPRS

Card 1/1

L 01251-67 T JWD/WE/JW/WW

ACC NR: AT6035619 SOURCE CODE: HU/2502/66/047/004/0385/0390

NEMETH, Andras, and SZALAY, Otto, Hungarian Oil and Gas Research Institute, Veszprem [Original-language version not given].

"New Method for the Quantitative Analysis of Combustion Processes with Toepler's Parallel Beam Schlieren Apparatus"

Budapest, Acta Chimica Academiae Scientiarum Hungaricae, Vol 47, No 4, 1966; pp 385-390.

Abstract [Author's English summary, modified; article in English]: A method is described for the quantitative study of combustion processes, which is based on intensity measurements by densitometry. In this method the values of the blackening obtained by means of Toepler's schlieren apparatus are compared with a measured reference series of blackenings. The applicability of the method is demonstrated by an example. Orig. art. has: 5 figures and 4 formulas. [JPRS: 36,862]

TOPIC TAGS: combustion mechanism, quantitative analysis

SUB CODE: 21,07 / SUBM DATE: 09 Apr 65/ OTH REF: 005

hs

Card 1/1 0922 0078

: Rumania
: Chemical Technology. Chemical Products and Their Applications - Instruments and Automation
[illegible] Zhur. - Khim., No 11, 1959

: [illegible] A. and [illegible], C.

: [illegible]

: The Application of Thermal Magnetic and Infrared [illegible] Analyzers in the Production of Acetylene from Methane

: [illegible]

: In the production of acetylene from methane, [illegible] [illegible] for the determination of [illegible] [illegible] is used for the [illegible] of the [illegible]. A description of the procedures used in the measurements is given together with a [illegible] of the [illegible] of the instruments [illegible].

From author's summary

NEMETH, A.

Plant experiences with catalytic and infrared gas analyzers during the production of acetylene from methane.

p. 164 (Magyar Kemikusok Lapja. Vol. 12, no. 5/6, May/June 1957, Budapest, Hungary)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

[illegible]	: Hungary
[illegible]	:
[illegible]	: [illegible]
[illegible]	: [illegible]
[illegible]	: [illegible]
[illegible]	: [illegible]
[illegible]	: [illegible]

: Maximum Rising Velocity of Vertical Pipes [illegible] Gaseous Liquid

[illegible] : [illegible]

[illegible] : The authors have investigated the flow of liquid gas mixtures in vertical pipes. It was found that for [illegible] pipes [illegible] the proper selection of a modified friction factor makes it possible to calculate the maximum rising velocity. The introduction of a modified friction factor reduces the problem to a consideration of two-phase flow. The authors indicate that for short pipes (lengths [illegible] m) the relationship depends on many [illegible] the ratio of the liquid and

[illegible] : [illegible]

16

Nemeth, A.; Laszio, A.

Automation of a plant for the partial oxidation of methane. p.369

MAGYAR KEMIKUSOK LAPJA. (Magyar Kemikusok Egyesulete)
Budapest, Hungary. Vol.14, no.9, September 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11
November 1959
Uncl.

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B124/B206

11.7100

AUTHOR: Németh, András

TITLE: Effect of pressure on the upper ignition limit of mixtures from paraffin- and olefinic hydrocarbons containing 1-4 carbon atoms and oxygen

PERIODICAL: Magyar Kémiai Folyóirat, no. 1, 1960, 25-30

TEXT: The upper ignition limit of mixtures of the respective gases with oxygen in the pressure range of 1-10 kg/cm^2 was studied, and the measurement results and respective conclusions are given in this article. When drawing up the mode of procedure, experience gained during the determination of the ignition limit was used (Ref. 5: A. László, A. Németh: Az éghetőség határai néhány háromkomponensü gázelegyben (The ignition limits of some ternary gas mixtures), Annual MÁFKI, 1959, in print). A system of communicating vessels with mercury, which was operated by nitrogen, was used for producing pressure. The liquid level was measured with an electronic device, the pressure between 0 and 5 kg/cm^2 was deter-

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mined with a mercury capillary manometer, and above 5 kg/cm^2 with a tubular spring manometer. A spark plug with a gap of 4-5 mm, operated by a 220-v, 60-w spark coil was used for igniting. A mercury detector was designed by the author for observing the explosion. The gases investigated were produced in the following way: methane from natural gas, ethane from a natural-gas fraction with up to 80% ethane concentration, propane and butane from commercial PB-gas, and the unsaturated compounds from the corresponding alcohols by means of dehydration on Al_2O_3. The gases were concentrated by means of adsorption on active carbon. Gas chromatography with active coal, an Al_2O_3 column, and CO_2 as carrier gas were used for the gas analysis. At given composition of the gas mixture, and starting from atmospheric pressure, the pressure was increased until explosion occurred under the action of spark ignition, or the upper limit of the pressure range was reached. The ignition limit for given parameters lies between the point at which the gas mixture ignites and the neighboring point at which it does not ignite. The measurement results are listed in Tables 1-7. The corrected hydrocarbon percentage in the tables was calculated from the composition of the gas charged by

means of the formula: $(CH_4 \text{ vol\%} \cdot 100)/(CH_4 \text{ vol\%} + O_2 \text{ vol\%})$, where the corresponding hydrocarbon may also be used instead of CH_4. The value given is only a characteristic one since the ignition limit of pure hydrocarbon slightly deviates from it. The results obtained are absolutely reproducible. The upper ignition limit measured with oxygen rises monotonically with pressure. From the straight lines for the dependence $c = f(p)$ for the paraffins and olefins investigated it may be seen that the relations measured can be expressed by an exponential equation. The following empirical equations were obtained: $c = 56.0\,(p-0.9)^{0.040}$ for methane, $c = 52.5\,(p-0.09)^{0.045}$ for ethane, $c = 47.5(p-0.09)^{0.425}$ for propane, $c = 41.5(p-0.09)^{0.045}$ for butane, $c = 64.0(p-0.2)^{0.083}$ for ethylene, $c = 43.5(p-0.2)^{0.095}$ for propylene, and $c = 32.0(p-0.2)^{0.097}$ for butylene. The values calculated from these empirical equations agree well with the values measured. The coefficients (a) and exponents (b) of the exponential functions mentioned were also investigated. The value (a) drops in both homolog series monotonically

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with the number of carbon atoms in the molecule. The value in parentheses is determined by the pressure at which the gas mixture burns at no concentration. The value of exponent (b) amounts to an average of 0.0425 for paraffins, and 0.090 for olefins. For the velocity of combustion V_b of methane, ethylene, and propylene as a function of pressure, Egerton and Lefebvre found the relation $V_b = \text{const.} p^{-x}$, where x= 0.5 - 0.25 as dependent on the type of hydrocarbon. According to Jost (Ref. 8: Explosions- und Verbrennungsvorgänge in Gasen. Berlin 1938 (Explosion- and combustion processes in gases, Berlin 1938), p. 122), the term of velocity of combustion of masses (M_b) was introduced, which means the mass of substance burnt during the unit time; for methane it was $M_b = \text{const.} p^{0.50}$, for ethylene $M_b = \text{const.} p^{0.75}$, and for propylene $M_b = \text{const.} p^{0.83}$ The relation between spark limit and velocity of combustion may thus be generalized for changes occurring under pressure effect. This article is a compilation of the major results mentioned in

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the second part of the author's dissertation for the Degree of Candidate. There are 4 figures, 8 tables, and 8 references: 1 Soviet-bloc and 7 non-Soviet-bloc. The four most recent references to English-language publications read as follows: A. Egerton, A. H. Lefebvre: Proc. Royal Soc., A 222, 206, 1954; C. M. Cooper, P. S. Wiezewich: Ind. Eng. Chem., 21, 1210, 1929; D. T. A. Townend: Proc. Royal Soc., A 116, 673, 1927; W. Payman, R. V. Wheeler: J. Chem. Soc., 123, 426, 1923.

ASSOCIATION: Veszprém, Magyar Ásványolaj- és Földgáz-Kísérleti Intézet (Hungarian Research Institute of Petroleum and Natural Gas, Veszprém)

SUBMITTED: August 11, 1959

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NEMETH, Andras, dr. (Budapest, IX., Papay I.utca 6-10)

Data on the correlation between the dimension and capacity increase of flame reactors. Acta chimica Hung 41 no.4: 461-468 '64.

1. Ungarisches Erdol und Erdgas Forschungsinstitut, Budapest-Veszprem.

LASLO, A. [Laszlo, A.] (Vengerskaya Narodnaya Respublika), [redacted], A. [Nemeth, A.] (Vengerskaya Narodnaya Respublika)

Technological problems involved in the production of acetylene by an incomplete combustion of methane. Gaz.prom. 5 no.11:39-43 N '60. (MIRA 13:11)

(Acetylene) (Methane)

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H/005/60/000/007/[illegible]
B124/B207

11.7100

AUTHORS: László, Antal and Németh, András

TITLE: The ignition limits of some ternary gas mixtures

PERIODICAL: Magyar Kémiai Folyóirat, no. 7, 1960, 254-259

TEXT: In acetylene production by means of partial methane oxidation it was - for reasons of dependability in operation - necessary to know the ignition limits of a mixture consisting of hydrogen, methane, acetylene, oxygen, and nitrogen; literature provides no data on this. According to the Le Chatelier equation, the ignition limit of combustible gas mixtures can be additively determined from the respective values of the individual components in pure state with oxygen or air: $n_1/N_1 + n_2/N_2 + n_3/N_3 + \ldots = 1$, where $n_1, n_2 \ldots$ is the separately measured lower (upper) ignition limit of the components and $N_1, N_2 \ldots$, the percentage of individual components at the lower (upper) ignition limit. Owing to the limited applicability of the Le Chatelier equation, it is recommended to check its accuracy in each instance by measurement. For this purpose, groups of three were formed

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from the components mentioned the measured limit values of ignition were introduced into the Le Chatelier equation. The diagrams necessary for calculation contain, however, only the results obtained with air, and not those with pure oxygen and air concentrated with oxygen. (Ref. 3: B. Lewis, G. Elbe: Combustion, Flames and Explosions of Gases, 1951, pp. 754-757). The ignition limits of the following mixtures were measured on the basis of above considerations: H_2-O_2-CH_4, H_2-O_2-N_2, C_2H_2-O_2-H_2, C_2H_2-O_2-N_2 and C_2H_2-O_2-CH_4; the mixture CH_4-O_2-N_2 was not measured, since, according to Ref. 4 (W. P. Jorissen: Ind. Eng. Chem. 19. 430. 1927), the limit value between the point measured with air and oxygen gives exactly a straight line. The one part of the gas mixtures gives the ignition limit of two combustible gases in oxygen, the other part the values measured at 0-100 % dilution with nitrogen in oxygen. Measurements were made in a simple laboratory device. The gas sample is taken through a stopper with two drillings and/or the reaction products are removed; the stopper is gas-tight up to 2 atmospheres. A short connecting piece is between stopper and explosion pipet. An electric spark was used for ignition: the ignition device consists of Pt electrodes reaching into a

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spherical space which ends in a glass tube. The latter is connected by means of vacuum rubber valve with the equilibration vessel which has a mercury seal. The gas mixture is conducted from the sample pipet into the spark gap; the gas is passed through a drying pipe filled with soda lime and calcium chloride. The degree of impurification of the gases used for measurement is given in Table 1: the corrections were determined on the basis of these values. Table 2 gives the results of measurement, i.e., in the first column the current number of the experiment, in columns II, III and IV the composition of the examined gas mixture in vol% and in column V, the result of measurement, where "+" denotes combustible, and "-" non-combustible. In each individual experiment, at least two determinations were made of one and the same gas mixture which indicates, that measurements are reproducible within $\pm$ 0.4 vol%. The results of measurement were recorded in the form of triangular diagrams (Figs. 2-6). The upper and the lower ignition limits of H_2, CH_4, C_2H_2 with oxygen were determined from Figs. 2, 4, and 6. Table 3 lists the values thus found and those determined from published data. A comparison shows that the measured lower limit for H_2 and C_2H_2 is lower and the measured upper limit higher than the published data, while for CH_4, the upper limit lies lower. The ignition limits of H_2

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and C_2H_2 in the air can be seen from Figs. 2 and 5: Table 4 compares these values with published data. The limit values of the mixtures H_2-O_2-CH_4, C_2H_2-O_2-H_2 and C_2H_2-O_2-CH_4 were determined by means of the Le Chatelier equation to be able to judge its validity, and the borderline recorded in Figs. 2, 4, and 6. Thus, it was found that the curves for C_2H_2-H_2 and H_2-CH_4 are in agreement, while a considerable deviation was found to exist in mixture C_2H_2-CH_4, i.e., toward the lower values. The values measured with nitrogen were also recorded (Fig. 7), and the experimental values were found to be in agreement with the calculated ones. To determine the action of nitrogen and a combustible gas upon another combustible gas, the ignition limit of the H_2-CH_4 mixture as a function of the CH_4 content, of the H_2-N_2 mixture as a function of the N_2 content (Fig. 8), as well as of C_2H_2 as a function of the H_2, N_2, and CH_4 (Fig. 9) content was calculated and recorded. The results indicate that in the case of hydrogen and acetylene in certain cases methane is better suited as diluting gas than nitrogen. This experience is also confirmed by practical results. There

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are 9 figures, 4 tables, and 6 non-Soviet-bloc references. The reference to the English-language publication reads as follows: B. Lewis, G. Elbe: Combustion, Flames and Explosions of Gases, 1951, pp. 749-752, 754-757)

ASSOCIATION: Veszprém, Magyar Ásványolaj és Földgáz Kísérleti Intézet (Hungarian Research Institute of Petroleum and Natural Gas, Veszprém)

SUBMITTED: October 8, 1959

Legend to Table 1:
a) impurifications

a)	Szennyezések	
	O_2, tf.-%	N_2, tf.-%
O_2		1,0—3,0
H_2	0—0,5	
CH_4	0	0,3
C_2H_2	0	
N_2	2,0	

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Legend to Fig. 2:
ignition limits of
the mixture
H_2-O_2-CH_4
tf% = vol%.

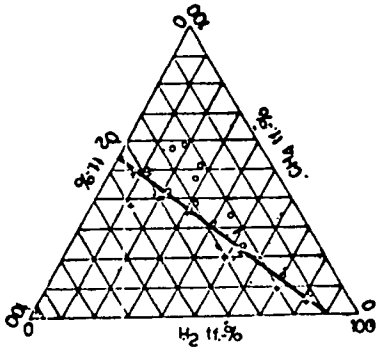

Fig. 2

Legend to Fig. 3:
Ignition limits of
the mixture
H_2-O_2-N_2
tf% = vol%

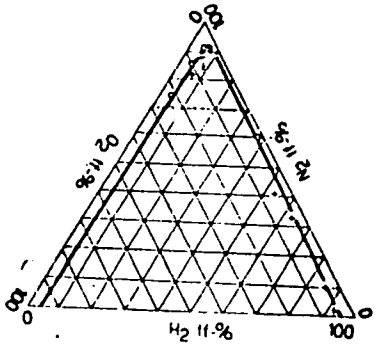

Fig. 3

Legend to Fig. 4:
Ignition limit
C_2H_2-O_2-H_2
tf% = vol%

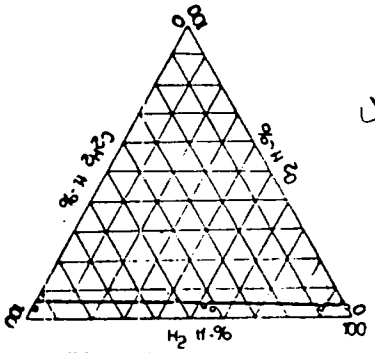

Fig. 4

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The ignition limits...

Legend to Table 2: 1) Current number of experiment, 2) composition of the gas mixture, vol%, 3) result

A kísérlet sorszáma (1)	(2) A gázelegy összetétele, tf.-% H_2	O_2	CH_4	Eredménye (3)		A kísérlet sorszáma (1)	(2) A gázelegy összetétele, tf.-% C_2H_2	O_2	H_2	(3) Eredménye	
1.	18,2	22,4	59,4		–	54.	90,4	9,6	0	+	
2.	30,4	32,4	36,9	+		59.	95,4	4,6	0		–
3.	28,3	25,3	46,4		–	60.	0	4,2	95,8	+	
4.	10,9	49,5	39,6	+		61.	0	3,3	96,7		–
5.	43,2	21,7	35,1		–	62.	7,9	3,7	88,4		–
6.	49,4	30,5	20,1	+		63.	41,0	3,8	55,0		–
7.	60,4	19,9	19,7		–	64.	42,9	4,9	52,0		–
8.	69,7	20,9	9,4	+		65.	38,5	7,2	54,2		–
9.	9,6	90,4	0	+		66.	46,4	10,0	43,6	+	
10	81,0	10,6	8,4		–						

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11.	10,8	38,7	50,5		–
12.	4,6	45,8	49,6	+	
13.	5,9	44,0	50,1	+	
14.	5,0	40,7	54,3		–
15.	95,0	5,0	0		–
16.	91,0	9,0	0	+	
17.	91,0	9,0	0	+	
18.	80,7	13,3	6,0	+	
19.	69,6	15,5	14,9		–
20.	53,0	24,7	22,3	+	
21.	52,9	22,4	24,6		–
22.	20,8	35,9	43,2		–
23.	20,6	36,5	42,9	+	
24.	31,0	32,2	36,6	+	
25.	31,2	29,8	39,0		–
26.	39,8	30,2	29,6	+	

	C_4H_1	O_2	N_2		
67.	1,8	20.6	77,5	+	
68.	1.4	20.7	77,9		–
69.	2.0	2,0	96,0		–
70.	3.0	2,0	95,0		–
71.	2.5	3.7	89,0		–
72.	3.0	12,7	84,5		–
73.	2,6	16.4	81,0		–
74.	7.2	9.7	83,1		–
75.	8.4	15,6	76,0	+	
76.	8.6	14.6	77,0	+	
77.	11.8	10,3	77,8	+	
78.	18,8	9,3	71,9		–
79.	39,9	10,6	49,5	+	

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27.	39,9	279	32,2		–
28.	0	42,0	58,1		–
29.	0	43,4	56,6		–
31.	0	44,9	55,1	+	
	H_2	O_2	N_2		
32.	5,5	11,7	82,5	+	
33.	4,2	9,2	86,6		–
34.	4,5	3,4	92,0		–
35.	8,3	6,8	85,0	+	
36.	4,9	6,2	89,0	+	
37.	6,9	2,5	90,6	+	
38.	36,5	2,2	61,3		–
39.	53,0	4,1	43,0	+	
42.	61,5	4,0	34,5	+	
55.	2,0	94,5	3,5	+	
56.	1,0	95,8	3,5	+	
	C_2H_2	O_2	CH_4		
80.	30,4	29,0	40,1	+	
81.	31,4	25,0	43,6	+	
82.	100,0	0	0		–
83.	31,3	32,4	35,2	+	
84.	13,0	16,5	50,0		–
85.	16,4	30,8	52,8		–
86.	75,0	10,4	14,6		–
87.	25,4	23,0	51,6		–
88.	34,8	23,8	41,4		–
89.	34,2	27,4	38,4	+	

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The ignition limits ...

43.	67,8	2,5	30,0	+
45.	82,4	4,0	11,0	+
46.	91,0	4,7	4,5	+
47.	95,0	4,0	1,0	+
48.	95,3	4,7	0	+
57.	3,0	94,0	3,0	–
58.	4,2	92,8	3,0	+

90.	35,4	26,2	38,4	+
91.	34,0	25,0	41,1	–
92.	20,0	34,6	45,4	+
93.	20,0	33,8	46,2	+
94.	58,3	18,4	23,3	+
95.	59,2	14,8	26,0	+

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The ignition limits...

Legend to Table 3: 1) ignition limits with oxygen, a) measurement, α) lower, β) upper, b) published data, α) lower, β) upper, 2) published data.

	(1) Az éghetőség határai oxigénnel				(2) Az irodalmi utalás
	(a) mérés		(b) irodalmi adat		
	(α) alsó	(β) felső	(α) alsó	(β) felső	
H_2	4,2	95,8	4,65	93,9	5
CH_4	—	56,0	5,40	59,2	5
C_2H_2	2,0	92,5	2,8	93	6

Legend to Table 4: I. Ignition limit with air, 1) measurement, a) lower, b) upper; 2) reference, a) lower, b) upper; II. published data

4. táblázat

Table 4

	I Az éghetőség határa levegővel				II Az irodalmi utalás
	1 Mérés		2 irodalmi adat		
	a alsó	b felső	a alsó	b felső	
H_2	4,0	75,0	4,00	74,00	5
C_2H_2	1,8	—	2,50	80,00	6

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The ignition limits...

Legend to Fig. 5:
Ignition limit of the mixture C_2H_2-O_2-N_2
tf% = vol%

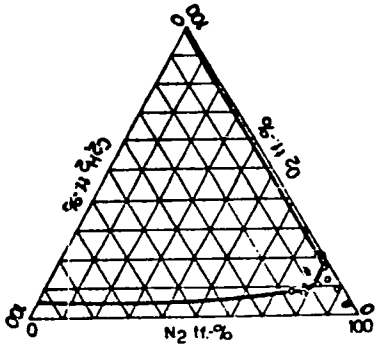

Fig. 5

Legend to Fig. 6:
Ignition limit of the mixture C_2H_2-O_2-CH_4
tf% = vol%

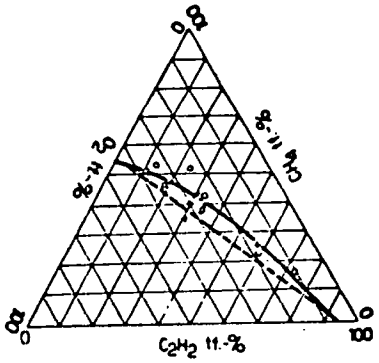

Fig. 6

Legend to Fig. 7:
Ignition limits of C_2H_2 and H_2 when diluted with N_2 a) ignition limit of vol% of [combustible gas + N_2], b) vol% oxygen, c) N_2/combustible gas

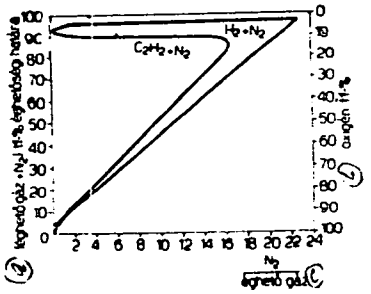

Fig. 7

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Legend to Fig. 8: ignition limits of H_2 when diluted with N_2 and CH_4; a) ignition limit of (H_2 + x), vol%

Legend to Fig. 9: Ignition limits of C_2H_2 when diluted with N_2, CH_4 and H_2; a) ignition limit of C_2H_2 + x, vol%

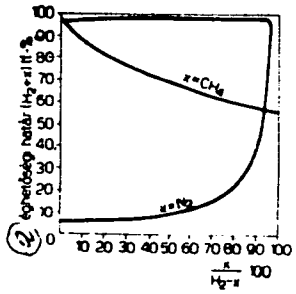

Fig. 8

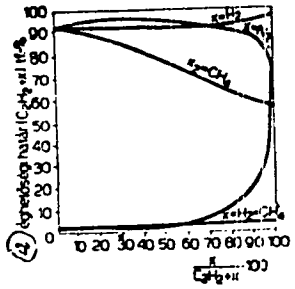

Fig. 9

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NEMETH, A.

Distr: 4E3d

Effect of pressure on the top ignitability limits of mixtures of oxygen and olefins and (or) paraffins containing 1–4 carbon atoms. András Németh (Magyar Asványolajés-Földgáz-Kisérleti Int., Veszprém, Hung.). *Magyar Kém. Folyóirat* 66, 25–30 (1960).—The top ignitability limits (t.l.) of mixts. of O with CH_4, C_2H_6, C_3H_8, C_4H_{10}, C_2H_4, C_3H_6, and C_4H_8 were dettd. at pressures of 0–10 atm. The t.l. increased with increasing pressures according to an exponential function, the exponent being approx. const. for a homologous series (0.0425 for paraffins and 0.090 for olefins). Within the same line the value of the exponent slightly increased with a decreasing no. of C atoms in the hydrocarbon.

L. G. Arvai

3 1-89 (NB)

S/081/62/000/008/039/057
B156/B101

AUTHORS: Németh, András, Losonczy, Géza

TITLE: Upper detonation point of methane under pressure, determined by the dynamic method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 480, abstract 8M178 (Magyar ásványolajés földgáz kisérl. int. közl., no. 2, 1961, 276-284)

TEXT: The upper detonation points of mixtures of methane and oxygen at pressures up to 3 atm were determined by the dynamic method devised. An empirical equation was derived from the data obtained for calculating upper detonation points as a function of pressure. [Abstracter's note: Complete translation.]

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D228/D301

11.7100

AUTHOR: Németh, András

TITLE: Study of the limits of combustibility of combustible gas-oxygen mixtures for designing their preheating

PERIODICAL: Magyar kémikusok lapja, no. 4, 1961, 185-188

TEXT: This study of preheating combustible gas-oxygen mixtures is proposed to fill the gap in technical literature. The main problem is that the mixture with maximum preheating should not ignite. There is an upper and lower limit of combustibility and the preheating of the mixture should take place outside these limits. The limits (composition of mixture) have to be determined as a function of temperature and pressure. An increase of the temperature increases the upper limit and decreases the lower limit, making the burning range wider. The relation is complex and hyperbolic. The relation between the limits of combustibility and pressure is not so clear. C_1 to C_4 paraffins and olephins were studied and the upper limit was found to increase with

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Study of the limits of...

the 0.0425 power in the case of paraffins and with the 0.09 power in the case of olephins. The final temperature of preheating is limited, so that no self-ignition should occur. The temperature of the heating fluid is limited by the requirement that the wall temperature should be low enough not to introduce such high energy which could ignite the mixture. Parallel flow heat exchangers, with the recirculation of the heating medium are suggested. Experiments were made with a methon--oxygen mixture to obtain relationships between ignition power, limit of combustibility and flow velocity. The quantitative results are true only in the case of the mixtures and apparatus used in the experiment, but the relations are supposed to be valid generally. As the heating wire was placed in a closed quartz tube, the temperature of the wall of this tube was assumed to be the same as that of the heating wire, making it possible to calculate the temperature from the power data of the original experiment. The relations between ignition temperature, limit of combustibility and flow velocity are shown in Figs. 4 and 5.

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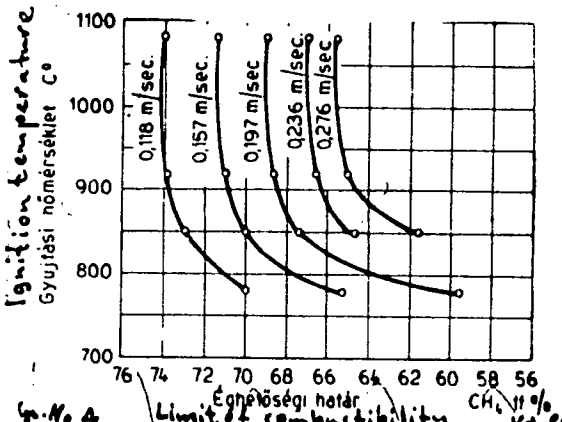
Study of the limits...



Gr. No 4.
1. ábra. A gyújtási hőmérséklet és az éghetőségi határ összefüggése
Relation between ignition temperature and limit of combustibility.

Limit of combustibility

Gr. No 5

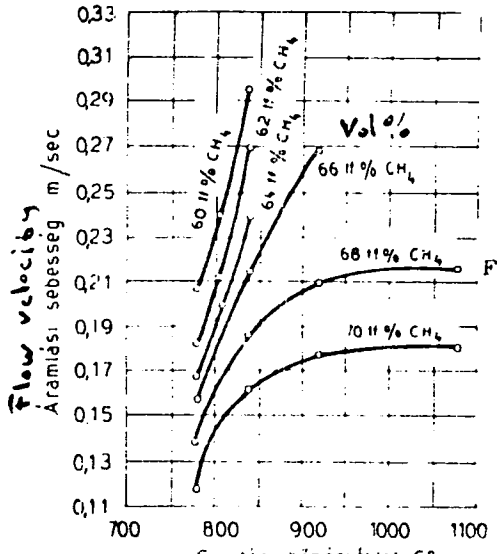


Fig. 5

bra. A gyújtási hőmérséklet és az áramlási sebesség összefüggése

Relation between ignition temperature and Flow velocity

Card 3/4 Fig. 4

H/006/61/000/004/001/001
D228/D301

Study of the limits of...

These relations can be extended to the whole range of combustibility. Then the ignition temperature versus mixture concentration would show a minimum at the stochiometric mixture, symmetrically increasing toward the limits of combustibility. The power function of the flow velocity and of the ignition temperature would have a maximum power in the case of stochiometric mixture. The conclusions are: a) Mixtures near the limits of combustibility can be preheated to a higher temperature than those near to the stochiometric mixture; b) the velocity of the heated mixture should be high, this will allow higher preheat temperature and higher heat transfer rate; c) the increase of pressure is disadvantageous as it increases the range of combustibility. Having two similar mixtures, the one under atmospheric pressure is nearer to the limit of combustibility than the one under pressure. There are 5 graphs and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J.W. Linnet, and J.S. Simpson. Reinhold, New York 1957, 20. old., Sixth Symposium on combustion.

ASSOCIATION: Magyar ásványolaj és földgáz kísérleti intezet (Hungarian Petroleum and Natural Gas Experimental Institute)

LASZLO, Antal; NEMETH, Andras

World situation of the research and industrial application of the partial oxidation of methane. Magy kem lap 16 no.6: 241-251 Je '61.

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet.

31875
S/170/62/005/001/003/013
B104/B102

11.8200

AUTHOR: Nemet, Andrash

TITLE: Study of the upper combustion limit of hydrocarbon gases on pressure changes

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 1, 1962, 27-32

TEXT: The upper combustion limit of a mixture of paraffin and olefin having 1-4 carbon atoms has been studied as a function of pressure. The pressure created in communicating containers was measured up to 5 atm with a mercury pressure gauge, and above 5 atm it was measured with a Bourdon pressure gauge. A mercury detector was developed to indicate explosions. The pressure increase during explosion was recorded electrically. The explosion pipette was 35 mm high and its diameter was also 35 mm; it could withstand up to 80 atm. One test series was performed between 1 and 5 atm, another between 1 and 10 atm. The pressure was increased from atmospheric pressure till it was impossible to ignite the gas with a spark. The gases were analyzed after combustion. The results proved completely reproducible. The following upper combustion limits C = f(p) (C in

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Study of the upper combustion...

% by volume) have been attained:

methane..... $C = 56.0\ (p - 0.9)^{0.040}$

ethane..... $C = 52.5\ (p - 0.9)^{0.045}$

propane..... $C = 47.5\ (p - 0.9)^{0.425}$

butane..... $C = 41.5\ (p - 0.9)^{0.045}$

ethylene..... $C = 64.0\ (p - 0.2)^{0.083}$

propylene..... $C = 43.5\ (p - 0.2)^{0.095}$

butylene..... $C = 52.0\ (p - 0.2)^{0.097}$

The theoretical adiabatic flame temperatures of the limiting paraffin mixtures are nearly linear functions of $1/p$ and have been calculated from the well-known relation $\Delta H_r^o + \sum H_k' - \sum H_R' = 0$, where ΔH_r^o denotes the standard reaction heat, $\sum H_R'$ and $\sum H_k'$ are enthalpy differences between the initial and final substances at temperature t and at normal temperature There are 4 figures, 1 table, and 8 references: 1 Soviet-bloc and

Card 2/3

Study of the upper combustion...

7 non-Soviet-bloc. The four most recent references to English-language publications read as follows: Weil S. A Fundamentals of Combustion of Gaseous Fuels Inst. Gas Technology, Bull. 15, Chicago, 1957, p. 10; Cooper C. M., Wiezevich P. S. Ind. Eng. Chem., 21, 1210, 1929; Townend D. T. A. Proc. Royal Soc., A116, 673, 1927; Payman W., Whealer R. V. Jour. Chem. Soc., 123, 426, 1923.

ASSOCIATION: Scientific Research Institute for Petroleum and Natural Gas, Budapest, Hungary

SUBMITTED: July 11, 1961

Card 3/3

X

NEMETH, Andras, dr.

Investigation of the correlation between the limit of inflammability and the mass rate of combustion in the 1 to 10 pressure domain. Acta chimica Hung 33 no.2:211-219 '62.

1. Ungarisches Erdgas und Erdol Forschunginstitut, Veszprem, Wartha Vince u.2-6.

NEMETH, Andras

Chemical industry aspects of the 9th International Combustion Symposium. Magy kem lap 18 no.4:168 Ap '63.

1. Vegyipari INVEST Vallalat.

LASZLO, Antal, kandidatus; NEMETH, Andras, kandidatus

An account of the 9th International Symposium on Combustion Science at Ithaca. Kem tud kozl MTA 19 no.3:377-386 '63.

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet, Veszprem.

LASZLO, Antal, prof. dr. (Veszprem, Wartha Vince u. 2-6, Magyarorszag);
NEMETH, Andras, dr. (Veszprem, Wartha Vince u. 2-6, Magyarorszag);
FAY, Laszlo (Veszprem, Wartha Vince u. 2-6, Magyarorszag)

On the correlations between the ignition parameters and streaming gases. I. Acta chimica Hung 35 no.2:233-243 '63.

1. Ungarisches Erdol- und Erdgas-Forschungsinstitut, Veszprem.

LASZLO, Antal, prof., dr.; NEMETH, Andras, dr. (Veszprem, Wartha Vince u.2-6); FAY, Laszlo (Veszprem, Wartha Vince u.2-6)

Correlations between the ignition parameters of streaming gases. II. Acta chimica Hung 35 no.3:351-359 '63.

1. Vegyipari Egyetem, Veszprem (for Laszlo). 2. Ungarisches Erdol und Erdgas Forschungsinstitut, Veszprem (for Nemeth and Fay).

NEMETH, Andras; TOTH, Mihaly

Measurement of radioactive contaminations departing through the air duct of the VVR-S experimental nuclear reactor in 1959-1963. Koz fiz kozl MTA 12 no.1:25-41 '64.

NEMETH, Andras

Development of producing acetylene and acetylene-ethylene from the point of view of petrol chemistry. Magy kem lap 19 no.7: 349-353 Jl '64.

1. Designing Enterprise for Chemical Plants, Budapest.

NEMETH, Andras, a kemiai tudomanyok kandidatusa

Development in the joint preparation of acetylene and acetylene-ethylene with petrolchemical base. Kem tud kozl MTA 21 no.2: 176-184 '64.

1. Hungarian Mineral Oil and Natural Gas Experimental Institute, Budapest-Veszprem.

NEMETH, Andras, [illegible]

Aromatic hydrocarbons from crude oil. Kem tud k.l MTA 12 no.3/4:312-319 '64.

1. Designing Enterprise of Chemical Plants, Budapest, and Hungarian Mineral Oil and Natural Gas Experimental Institute, Veszprem-Budapest.

L 63680-65
ACCESSION NR: AT5021742 HU/2502/64/041/01-/0067/0074

AUTHOR: Vigh, Katalin (Vig, K.)(Budapest); Nemeth, A.(Nemet, A.)(Budapest)

TITLE: Qualitative semimicro cation analysis with the aid of the annular-oven technique

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 41, no.1-2, 1964,67-74

TOPIC TAGS: cation, paper chromatography, hydrogen sulfide

ABSTRACT: A semimicro qualitative method was described for the separation of cations involving an annular oven and paper chromatography, the reagent being hydrogen sulfide. The analytical scheme follows the classical separating technique. The simple annular oven and the paper-chromatographic techniques involved were described and discussed. A method for the separation of silver, monovalent mercury and bivalent mercury was described in more detail. "We thank Professor L. Erdey, who recommended the investigation of this problem to us and supported us with his valuable suggestions." Orig. art. has: 4 tables, 2 figures.

Card 1/2

L 63680-65
ACCESSION NR: AT5021742

ASSOCIATION: Institut fur Allgemeine Chemie der Technischen Universitat, Budapest (Institute for General Chemistry, Technical University)

SUBMITTED: 05Jun63 ENCL: 00 SUB CODE: GC

NR REF SOV: 000 OTHER: 020 JPRS

Card 2/2

L 63726-65

ACCESSION NR: AP5022244 HU/2502/64/0041/0004/0461/0468

AUTHOR: Nemeth, Andras (Nemet, A.)(Doctor)(Budapest) B+1

TITLE: Relations between the increase in dimensions and capacity of flame reactors

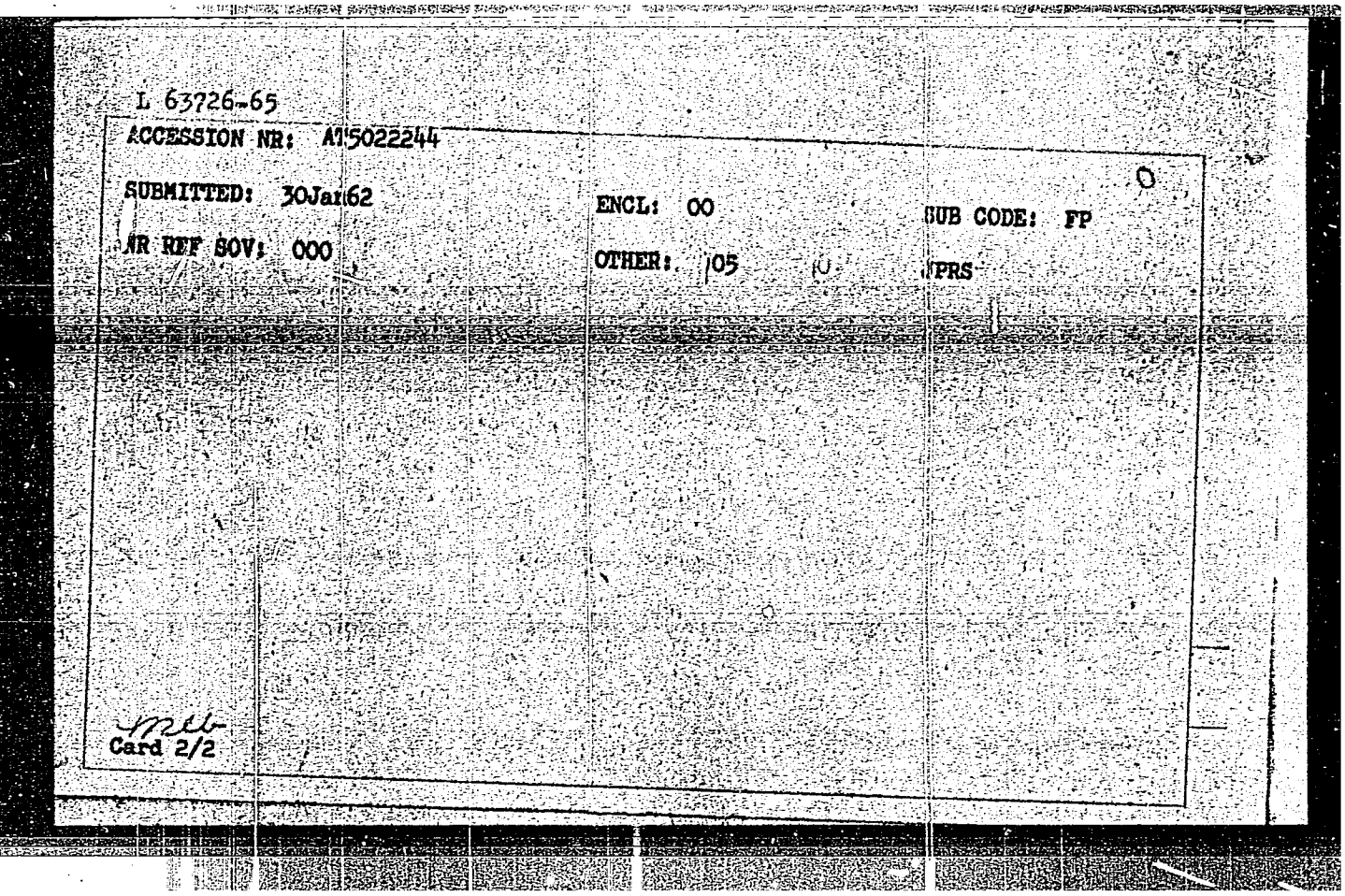
SOURCE: Academiae scientiarum hungaricae. Acta chimica, v. 41, no. 4, 1964, 461-468

TOPIC TAGS: flame, oxidation, chemical laboratory apparatus, methane

ABSTRACT: Equations were derived on a theoretical basis for the characterization of the correlation between the increase in dimensions and increase in capacity for flame reactors. The validity of the equation was verified by data obtained by actual measurements on flame reactors for partial methane oxidation, in laboratory-, pilot-plant-, and industrial-scale experiments. Orig. art. has: 2 tables, 25 formulas, 1 graph.

ASSOCIATION: Ungarisches Erdol und Erdgas Forschungsinstitut, Budapest
Hungarian Research Institut for aPetroleum and Natural Gas)

Card 1/2



L 63726-65

ACCESSION NR: AT5022244

SUBMITTED: 30Jan62 ENCL: 00 SUB CODE: FP

NR REF SOV: 000 OTHER: 005 PRS

Card 2/2

NEMETH, Antal

Industrial and farm buildings in Yugoslavia. Magy ep ipar 13 no. 2:69-75 '64.

L 49211-65

ACCESSION NR: AP5015176 HU/0018/64/000/008/0434/0436

AUTHOR: Heltai, Felix; Nemeth, Anton

TITLE: Method of checking the wear resistance of support abrasives

SOURCE: Constructia de masini, no. 8, 1964, 434-436

TOPIC TAGS: abrasive, nonmetal wear resistance

Abstract: The authors describe a method for the mechanical testing of support abrasives by measuring the strength of the bond between the abrasive granules and the supporting material. With the device they describe, 5 parallel tests allow a reproducible determination of wear resistance to within ± 3 percent. Orig. art. has 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT
NO REF SOV: 000 OTHER: 000 JPRS

Card 1/1

NEMETH, Arpad; BERKI, Ferenc

Insturmental examination of canning industry drying apparatus. Elelm ipar 19 no.4:108-115 Ap '65.

1. Central Research Institute of Food Industry, Budapest (for Nemeth). 2. Canning and Paprika Industry Research Institute, Budapest (for Berki).

NEMETH, A.B.

Aspects of the theory of convex cones in the Hilbert space from the standpoint of polar notion. Comunicarile AR 13 no.9: 773-775 S'63.

1. Academia R.P.R., Filiala Cluj, Institutul de calcul. Comunicare prezentata de acad. T.Popoviciu.

[illegible]ETH, S.

The first Hungarian [illegible] chemistry book.

p. 197 (Magyar Kemikus Lapja. Vol. 1, no. 7, [illegible]Aug. 1947, Budapest, [illegible])

Monthly Index of East European Accessions (EEI). Vol. 7, no. 2,
February 1958

NEMETH, Bela

State and tasks of the construction industry documentation Epites szemle 5 no.1:19-23 '61.

1. Epitesugyi Miniszterium Dokumentacios Iroda igazgatoja.